In the Claims

Claims 1-53 are cancelled.

54. (previously presented) A power injector system for use with a magnetic resonance imaging system installed at least in part within an electromagnetic interference shielded room electrically accessible via a penetration panel, the power injector system comprising:

a power head and power control unit adapted for operation within the shielded room to controllably inject a compound into a patient;

a power supply for operation outside the shielded room to receive utility electrical power; and

a power connection configured to couple electrical power through the penetration panel between the power supply outside of the shielded room and the power control, the power connection comprising a radio frequency filter reducing radio frequency electrical energy carried through said power connection.

55. (previously presented) The power injector system of claim 54, further comprising:

a control panel for generating data signals to control said power head adapted for operation outside the shielded room;

a power head control for actuating the powerhead; and

a data connection coupling said data signals from said control panel to said power head control for actuating said power head.

56. (previously presented) A method of connecting a battery-powered magnetic resonance (MR) injector system in a shielded magnet room to a remote power supply, the method comprising:

placing a power supply outside of the shielded magnet room, the power supply coupled to an AC outlet for electrical power;

providing shielded cables having conductors adapted for electrical power transmission, wherein one cable positioned outside the magnet room couples the power supply to a penetration panel and the other cable positioned inside the magnet room couples the power from the power supply from the penetration panel the MR injector system,

providing a radio frequency filter at the penetration panel reducing radio frequency electrical energy carried through at least one conductor of at least one of said shielded cables; and

connecting a power control of the MR injector system in said shielded magnet room to conductors of the shielded cables so that power from said power supply is provided to components of said injector system that previously received only battery power.

57. (previously presented) The method of claim 56, further comprising:

in the power supply, relaying data signals from a console in the control room to the shielded cable.

58. (previously presented) The method of claim 56, further comprising:

in the power supply, coupling AC electrical power from an AC outlet to an AC outlet externally mounted on the power supply for powering the console.

59. (previously presented) The power injector system of claim 54, wherein said radio frequency filter is incorporated within said penetration panel.

60. (previously presented) The method of claim 56, wherein said radio frequency filter is incorporated within said penetration panel.

61. (previously presented) The power injector system of claim 54, wherein the power head comprises an electro-mechanical device, and the power connection is configured to actuate the electro-mechanical device.

62. (previously presented) The power injector system of claim 61, wherein the power head comprises an ultrasonic motor, and the power connection is configured to actuate the ultrasonic motor.

63. (previously presented) The power injector system of claim54, wherein said radio frequency filter grounds conductive shields included within said power connection.

64. (previously presented) The power injector system of claim 54, wherein said radio frequency filter attenuates RF noise within a rejection frequency band selected to correspond to the RF frequencies used by said magnetic resonance imaging system.

65. (previously presented) A medical imaging suite comprising:

a shielded room having walls that include electromagnetic shielding;

an AC power outlet located outside the room;

a magnetic resonance imaging system comprising a magnet that is located inside the room; and

a power injector system comprising:

a power head and power control located inside the room;

a power supply located outside the room, the power supply accessing and receiving power from the AC power outlet; and

a power connection configured to convey electrical power from the power supply, through a wall of the room, and to the power control, wherein the power connection comprises a radio frequency filter.

66. (previously presented) The imaging suite of claim 65, wherein the power head comprises an electro-mechanical device, and the power connection is configured to provide power to the electro-mechanical device.

67. (previously presented) The imaging suite of claim 65, wherein the power head comprises an ultrasonic motor, and the power connection is configured to provide power to the ultrasonic motor.

68. (previously presented) The imaging suite of claim 65, further comprising a control panel located outside the room for generating data signals to control said power head;

said power connection further configured to convey data signals from said control panel to said power head for controlling said power head.

69. (previously presented) The imaging suite of claim 65, wherein said radio frequency filter grounds conductive shields included within said power connection.

70. (previously presented) The imaging suite of claim 65, wherein said radio frequency filter attenuates RF noise within a rejection frequency band selected to correspond to the RF frequencies used by said magnetic resonance imaging system.

71. (new) A medical imaging suite comprising:

an AC power outlet;

a shielded room having walls that include electromagnetic shielding;

a magnetic resonance imaging system comprising a magnet that is located inside the room; and

a power injector system comprising:

a power head located inside the room;

a power supply accessing and receiving power from the AC power outlet; and

a power connection configured to convey electrical power from the power supply to the power head, wherein the power connection comprises a radio frequency filter.

72. (new) The imaging suite of claim 71, wherein the power head comprises an electro-mechanical device, and the power connection is configured to provide power to the electro-mechanical device.

73. (new) The imaging suite of claim 71, wherein the power head comprises an ultrasonic motor, and the power connection is configured to provide power to the ultrasonic motor.

74. (new) The imaging suite of claim 71, further comprising a control panel for generating data signals to control the power head.

75. (new) The imaging suite of claim 74, wherein the power connection is configured to convey data signals from the control panel to the power head for controlling the power head.

76. (new) The imaging suite of claim 71, wherein the radio frequency filter grounds conductive shields included within the power connection.

77. (new) The imaging suite of claim 71, wherein the radio frequency filter attenuates RF noise within a rejection frequency band selected to correspond to the RF frequencies used by the magnetic resonance imaging system.

78. (new) The imaging suite of claim 71, wherein the power connection comprises electrical cable.

79. (new) The imaging suite of claim 71, wherein the power injector system comprises a battery compartment.

80. (new) The imaging suite of claim 71, wherein the power supply of the power injector system comprises an AC-DC switcher for power conversion.

81. A method of operation for a magnetic resonance imaging suite, the method comprising:

a power supply of a magnetic resonance injector system receiving electrical power from an AC power outlet, conveying electrical power from the power supply of the magnetic resonance injector system via a power connection to a component of the magnetic resonance injector system located inside a shielded room of the magnetic resonance imaging suite, wherein the shielded room includes walls having electromagnetic shielding, and wherein at least a magnet of a magnetic resonance imaging system is located inside the shielded room; and

filtering radio frequency energy emitted from the power connection during the conveying.

82. (new) The method of claim 81, wherein the power connection comprises electrical cable.

83. (new) The method of claim 82, wherein the conveying comprises conveying electrical power through the electrical cable.

84. (new) The method of claim 81, further comprising:

transmitting data signals into the shielded room from outside the shielded room.

85. (new) The method of claim 84, wherein the transmitting comprises transmitting data signals through electrical cable.

86. (new) The method of claim 81, wherein the component comprises a power head of the magnetic resonance injector system.

87. (new) The method of claim 81, wherein the component comprises an electro-mechanical device of the magnetic resonance injector system.

88. (new) The method of claim 87, wherein the conveying comprises conveying electrical power from the power supply to the electro-mechanical device.

89. (new) The method of claim 81, wherein the component comprises an ultrasonic motor, and the conveying comprises conveying electrical power from the power supply to the ultrasonic motor.

90. (new) The method of claim 81, wherein the component comprises a power control of the magnetic resonance injector system.

91. (new) The method of claim 81, wherein the magnetic resonance injector system comprises a battery compartment.

92. (new) The method of claim 81, wherein the power supply of the magnetic resonance injector system comprises an AC-DC switcher for power conversion.

93. (new) The method of claim 81, wherein the filtering comprises attenuating RF noise within a rejection frequency band selected to correspond to RF frequencies used by the magnetic resonance imaging system.